

Epistaxis (nosebleed)

- Aetiology of epistaxis
 - Primary/idiopathic (80-85%) or Secondary
 - Secondary causes can be local or systemic
 - Local
 - Trauma (fracture, nose picking, foreign body, post-operative)
 - Infection (rhinitis, sinusitis)
 - Neoplasms (e.g. malignancy, juvenile angiofibroma, inverted papilloma)
 - Systemic
 - Drugs (anticoagulants, cocaine)
 - Haematological disorders (haemophilia, leukaemia, idiopathic thrombocytopenic purpura)
 - Hereditary haemorrhagic telangiectasia (HHT, also known as Osler-Weber-Rendu)
 - Hypertension (prolongs bleeding)
 - Chronic granulomatous disease (Wegener's, Sarcoidosis)
- Anatomy of the vessels in epistaxis
 - Anterior bleed (Most common)
 - Usually from Little's Area (Kiesselbach's Plexus) on anterior-inferior septum
 - Internal Carotid Artery → Anterior Ethmoidal
 - External carotid artery → Superior labial, Greater palatine, Sphenopalatine
 - Posterior bleed (Less common)
 - Often from Woodruff's Plexus (venous plexus inferior to the posterior end of inferior turbinate)
- History in Epistaxis
 - Presenting complaint
 - Which nostril?
 - Onset?
 - Duration?
 - Running out front of nose or dripping down back of throat (or both)?
 - If traumatic rule out other facial, ocular and head injuries
 - History of presenting complaint
 - Previous episodes
 - Previous treatment
 - Past medical history
 - Recent trauma
 - Recent or previous nasal surgery
 - Hypertension
 - Bleeding tendency
 - Medications
 - Anticoagulants (e.g. Aspirin, Clopidogrel, Warfarin)
 - Antihypertensives
 - Allergies (to peanuts in case you need Naseptin cream)
 - Family history
 - Bleeding tendency
 - Social history
 - Cocaine use
 - Occupation for risks of nasopharyngeal carcinoma
 - Safe for potential discharge?
 - Ideas; concerns; expectations

- Examination of epistaxis
 - Do not underestimate as epistaxis can be fatal
 - Remember personal protective equipment
 - Airway, Breathing, Circulation
 - Suction out large clots from nose
 - Anterior rhinoscopy with Thudicum Speculum
 - Oropharynx with tongue depressor for posterior bleeding
 - Posterior rhinoscopy with Rigid Endoscope if necessary and able to do so

- Initial investigation of epistaxis
 - Full blood count
 - Clotting
 - Group and save (as a minimum)

- Further investigation of epistaxis
 - Identification of systemic causes if suspicious

- Initial management of epistaxis
 - Ensure airway not compromised by bleeding and not in shock (see shock section)
 - Resuscitate if needed with IV access and fluids
 - Consider reversal of anticoagulants depending on indication
 - First aid
 - Sit patient forward, pinch soft fleshy part of nose, ice on forehead/back of neck, instruct to spit blood into bowl as swallowing can cause nausea and vomiting.
 - During this time ready Co-phenylcaine local anaesthetic spray (decongestant and vasoconstrictor), suction, good light, nasal (Thudicum speculum), anterior packs (e.g. Merocel sponge, Rapid Rhino hydrocolloid pack, Bismuth Iodoform Paraffin Paste (BIPP) impregnated ribbon gauze)
 - After 15-20 minutes re-examine
 - If bleeding stopped
 - Identify any target vessel for cautery using silver nitrate stick. You may see a clot, oozing vessel, prominent vessel etc. Cauterise around target initially to stop feeding vessels then on source itself. Rub Vaseline on top lip as otherwise can cause chemical burn and discolouration from silver nitrate running down. → Discharge home after observation. Provide Naseptin cream (twice daily for 2 weeks) and avoid strenuous activity. ENT follow up depending on local protocol.
 - If bleeding continues
 - Anterior packing and admit. Ensure pack both sides for effective tamponade. Merocel/nasal tampon requires lubrication with KY jelly and attaching a 0 silk if no string already attached. Insert along floor of nose. Hydrate with 10ml water to expand. Rapid Rhino requires dipping in water first, insertion, then expansion with a syringe.
 - Provide analgesia +/- antibiotics depending on local protocol if packed.

- Further management of epistaxis – call for ENT assistance:
 - Posterior packing
 - Options depend on local equipment but include Foley Catheter (unlicensed use), Brighton Balloon, posterior Rapid Rhino, Epistat, Formal posterior packing (rare) + anterior packing with BIPP impregnated ribbon gauze if not available as part of posterior pack.
 - Surgical treatment
 - Endoscopic Sphenopalatine artery ligation; Anterior Ethmoidal artery ligation; Maxillary artery ligation; External Carotid artery ligation; Interventional radiology; Laser treatment of HHT

- Common questions concerning epistaxis
 - HHT/Osler-Weber-Rendu
 - Recognised by telangiectasia on lips and tongue.
 - Do not pack as can cause more bleeding.
 - Kaltostat or adrenaline soaked gelatine sponge if necessary.
 - Cauterisation
 - Do NOT cauterise both sides as you will cause a septal perforation.
 - Likewise excessive cauterisation unilaterally is also a risk.